

FIG. 1

1

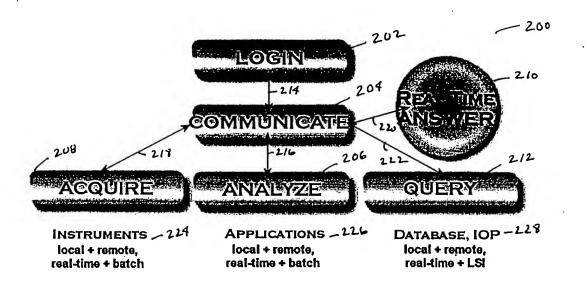


FIG. 2

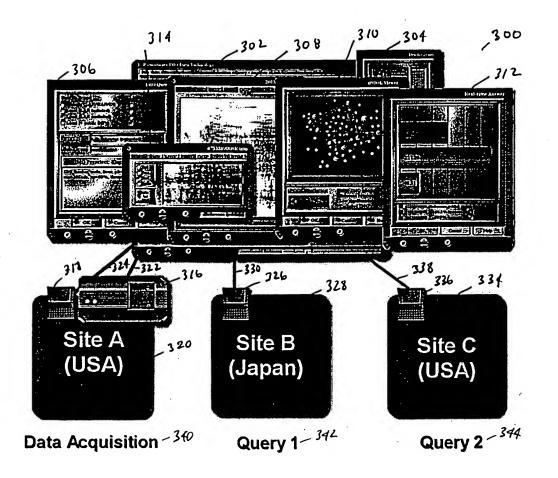


FIG. 3

```
10gjn - 402
                        - UDA Tcheck PWd
                                                                                               - 406
    404
                                                       create session key - 408 set encryption level - 4/0
                                                       load user profile -4/2
                                                        set user permissions-4/4
                                                       save user network location 4/6 enable user persistency 4/3
                                                       start GUI ...
            422 -UPL7 enable user preferences 421 load user menu selections - 426
    428 - Acquire
          #30 - DIAC Testablish communication - #32 Initiate Imager - #34
                                                      initiate imager
call IMO-Gycreste MO UID pane — 434
issue UID, ORR ICR — 434
issue UID, ORR ICR — 42
creste ODP
store MSD and define RDM-
                                                   update RDM in sync with imager close RDM-update OPD 752 update OSE record update MSD aend Dil 458
460 Query
                                                    open query dialog — 46 f
load predefined QSS — 41 6
acknowlege user input in UPL — 46 8
provide IMO-H with VSS — 470
read MDX for PPC — 472

check IMO's for OPD match — 474
check IMO's for OPD match — 474
inquire OAM on match — 474
update OSE record 48 478
extract partial data via VSS link — 48 7
create temp array from RDM subset
rum temp erray on ONE, GIN — 486
read MDX for OTE — 490 — 48 8
                                                   read MDX for OTE — 490

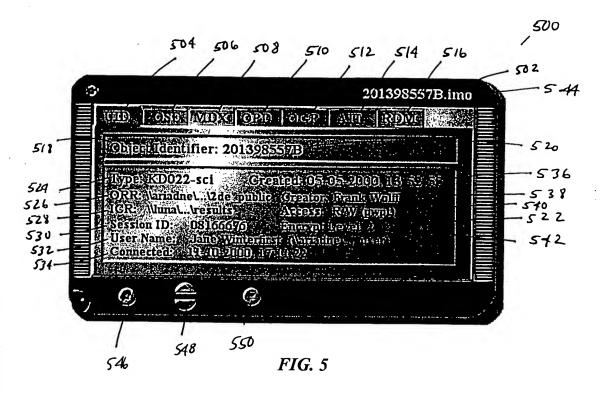
read MDX for OTE — 490

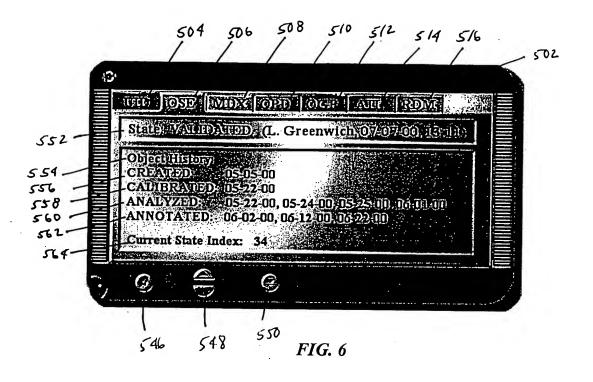
address external data via ATI — 491

extract partial data via VSS link

copy external data SS to temp array

update normalized temp array — 494
       495 — RAE use RGI to accumulate results — 494 sort aggregated matrix — 497 rank similarities — 498 rank relevancy — 498 report rank result to KEE and DLE — 47/ update significance index — 473 report final matrix to IOH via RGI — 473
                                                                             lauch IMO-Z for proximity display — 977 use AAA to generate output windows — 97 update OSE record — 48/ update UPL — 483
                                                                                                                                                _485
                                                      relevant real-time answer
                                                                                                                                                                      FIG. 4
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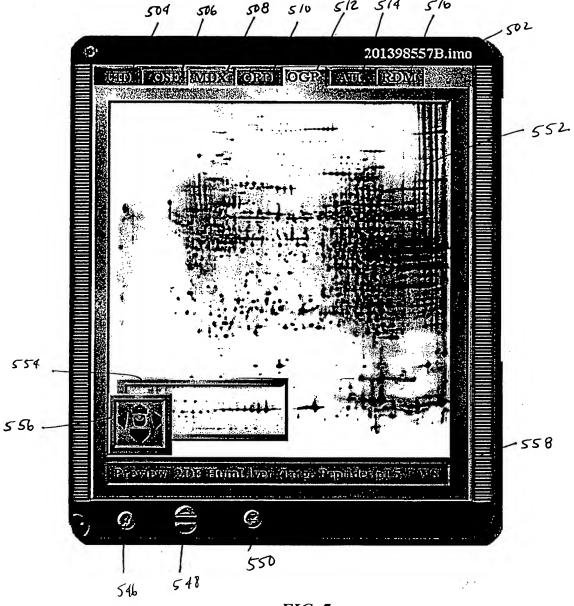


FIG. 7

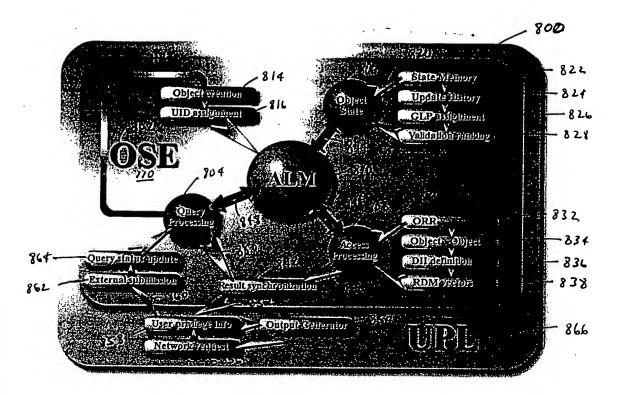


FIG. 8

IMO OSE State Lookup Table — 90

000 Object created

010 Data acquisition

011 DA in progress

012 DA interrupted

013 DA continued

014 DA completed

020 Data type definition

021 DT raw

022 DT matrix

023 DT structure

024 DT vector

025 DT pointer

026 DT path

027 DT binary

028 DT ASCII

040 Bio-Calibrations

041 C quantitation

042 C molecular weight

043 C isoelectric point

044 C enzyme-activity

045 C immunological activity

046 C other bio-activity

050 Image-Calibrations

051 C optical density (OD)

052 C fluorescence intensity

053 C luminescence intensity

054 C white balance

055 C light intensity

056 C dynamic range verification

060 Measurement-Calibrations

061 C origin

062 C size x

063 C size y

064 C position x

065 C position y

066 C position z

067 C length

068 C width

069 C depth

070 Annotations

071 Descriptive text

072 Base designation (DNA sequence)

073 Aminoacid designation (protein sequence)

074 Molecule function

075 Molecular structure

080 Functionality information

081 Organism

082 Metabolic phase

083 Disease relationship

100 Standardization/normalization

101 STD threshold

102 STD base function (e.g., baseline)

103 STD base plane (e.g., in 3D space)

14x STD all 04x (Bio; e.g., 141 STD

quantitation)

15x STD all 05x (Image; e.g., 152 STD

fluorescence intensity)

300 Experiment validation

301 Invalid conditions

302 Invalid experiment

303 Invalid interpretation

304 Invalid analysis tool applied

310 Unsure result

311 Unsure conditions

312 Unsure method

320 Validated method

321 Validated analysis

333 Validated experiment

340 Forensic experiment

350 Certified experiment

400 Output request

410 Numerical output generated

411 Graphical output generated

420 Remote output sent

430 Output printed

900 Access information

901 Access denied

902 Time limit exceeded

903 User limit exceeded

910 Inter-object communication granted

911 User access to object granted

920 Full access to object granted

FIG. 9

Object:				
State	User/level	Network	Date/time stamp	(Explanation)
000	RAS/05	00220	12/20/2000 14:33:05	(object created)
011	WUD/02	00220	12/20/2000 14:33:07	(data: acquisition in progress)
014	WUD/02	00220	12/20/2000 16:53:07	(data: acquisition completed)
022	WUD/02	00220	12/20/2000 16:55:22	(data: matrix defined)
056	GOT/03	00220	12/21/2000 08:00:57	(image: dynam. range verified)
052	GOT/03	00220	12/21/2000 08:01:46	(image: fluoresc. intens. calib.)
041	GOT/03	00220	12/21/2000 08:16:31	(bio: quantitation calib.)
061	GOT/03	00220	12/21/2000 08:18:58	(image: origin calib.)
062	GOT/03	00220	12/21/2000 08:20:25	(image: size x calib.)
063	GOT/03	00220	12/21/2000 08:23:19	(image: size y calib.)
101	GOT/03	00220	12/21/2000 08:25:44	(std/norm: detection threshold)
164	GOT/03	00220	12/21/2000 08:41:12	(std/norm: measurement x)
165	GOT/03	00220	12/21/2000 08:45:30	(std/norm: measurement y)
901	KRE/05	08000	12/21/2000 08:45:31	(access denied)
911	AAH/02	04092	12/21/2000 08:45:44	(user: access to object granted)
071	AAH/02	04092	12/21/2000 08:45:50	(anno: descript. text)
024	GOT/03	00220	12/21/2000 08:52:12	(data: vector defined)
911	BLD/03	00693	12/21/2000 09:02:36	(user: access to object granted)
073	BLD/03	00693	12/21/2000 09:02:39	(anno: AA protein sequence)
045	GOT/03	00220	12/21/2000 09:14:08	(bio: immunol. activity)
046	GOT/03	00220	12/21/2000 09:39:41	(bio: other bio-activity)
410	GOT/03	00220	12/21/2000 09:42:31	(output: numerical output)
411	GOT/03	00220	12/21/2000 09:44:07	(output: graphical output)
430	GOT/03 ·	00220	12/21/2000 09:42:31	(output: printed)
••••				2.5

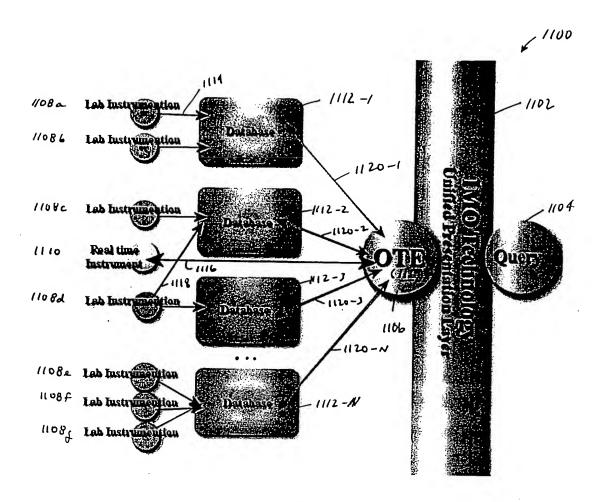


FIG. 11

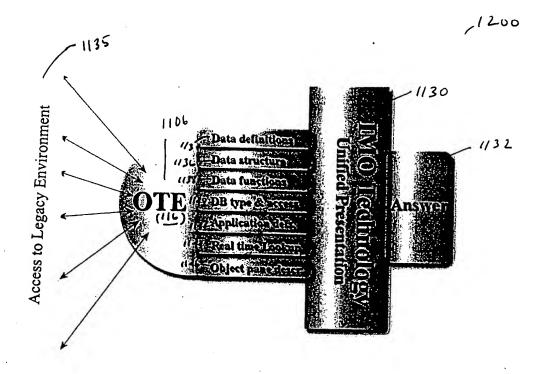
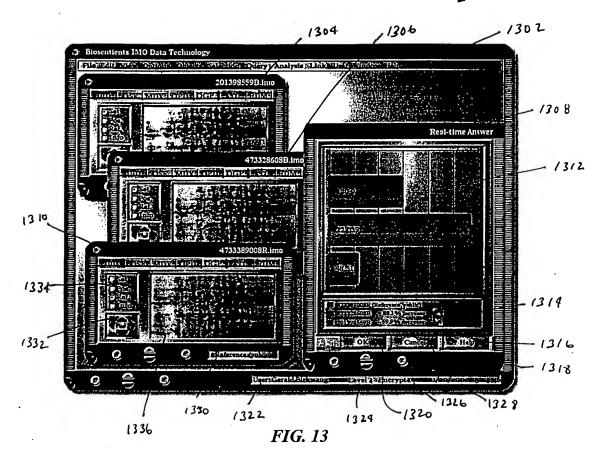
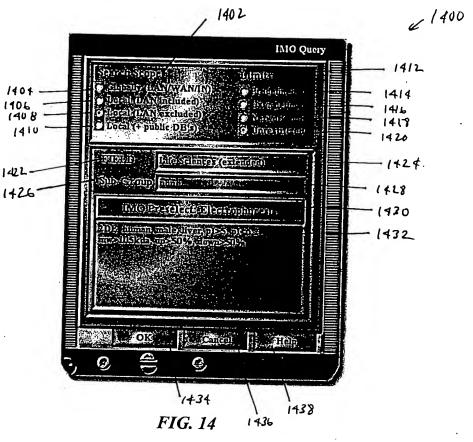


FIG. 12





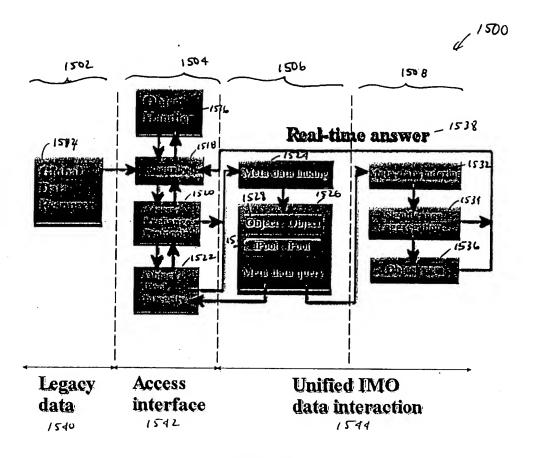


FIG. 15

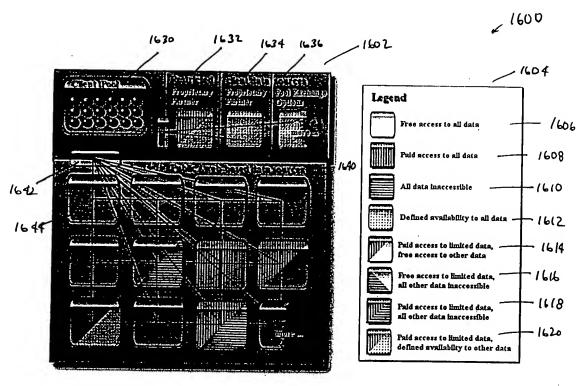


FIG. 16

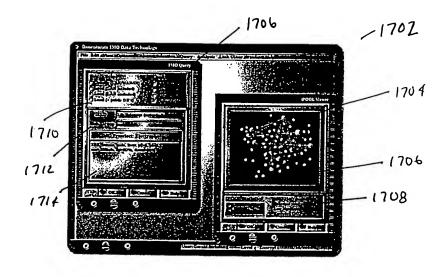


FIG. 17A

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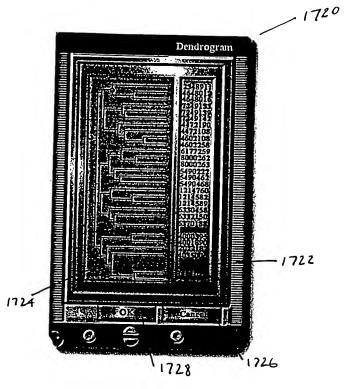


FIG. 17B

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EIG. 17C

